3. *Vertical Velocity.*—This was computed only over the sea level center. From equations (2.2) and (2.3), one obtains:

$$\frac{\frac{\delta Q}{\delta t}+\mathbf{V}\cdot\nabla Q-\mathbf{C}\cdot\nabla Q}{Q^2}=\frac{\partial}{\partial p}\left(\frac{\omega}{Q}\right) \tag{3.1}$$

or

$$\int_{p_1}^{p_0}\frac{\frac{\partial Q}{\partial t}+\mathbf{V}\cdot\nabla Q-\mathbf{C}\cdot\nabla Q}{Q^2}\delta p=\left(\frac{\omega}{Q}\right)_0-\left(\frac{\omega}{Q}\right)_1 \tag{3.2}$$

Using the boundary condition that ω_0 vanishes at sea level (p_0=1000 mb.) the vertical velocity was obtained for any higher level by columnar interpolation.

For a discussion of accuracy of such computations and the difficulties encountered, reference is made to Petterssen and Bradbury [3].

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